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# TRANSMITTAL FORM

*(to be used for all correspondence after initial filing)*

Total Number of Pages in This Submission

| | |
|---|---|
| Application Number | 09/683,605 |
| Filing Date | January 24, 2002 |
| First Named Inventor | Schondorf, et al. |
| Art Unit | 3661 |
| Examiner Name | Hernandez |
| Attorney Docket Number | 81047078 (FGT 1543 PA) |

## ENCLOSURES *(Check all that apply)*

- [x] Fee Transmittal Form
  - [ ] Fee Attached
- [ ] Amendment/Reply
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Reply to Missing Parts/ Incomplete Application
  - [ ] Reply to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert to a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s) _____
  - [ ] Landscape Table on CD
- [ ] After Allowance Communication to TC
- [ ] Appeal Communication to Board of Appeals and Interferences
- [x] Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- [ ] Proprietary Information
- [ ] Status Letter
- [ ] Other Enclosure(s) (please Identify below):

Remarks

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

| | | | |
|---|---|---|---|
| Firm Name | Artz & Artz, P.C. | | |
| Signature | Jeffrey J. Chapp | | |
| Printed name | Jeffrey J. Chapp | | |
| Date | April 8, 2005 | Reg. No. | 50,579 |

## CERTIFICATE OF TRANSMISSION/MAILING

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| | | | |
|---|---|---|---|
| Signature | Jo Anne Croskey | | |
| Typed or printed name | Jo Anne Croskey | Date | April 8, 2005 |

PTO/SB/17 (12-04)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE


*Effective on 12/08/2004.*
*Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).*

# FEE TRANSMITTAL
## For FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

**TOTAL AMOUNT OF PAYMENT** ($) 500.00

| Complete if Known | |
|---|---|
| Application Number | 09/683,605 |
| Filing Date | January 24, 2002 |
| First Named Inventor | Schondorf, et al. |
| Examiner Name | Olga Hernandez |
| Art Unit | 3661 |
| Attorney Docket No. | 81047078 (FGT 1543 PA) |

**METHOD OF PAYMENT** (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☑ Deposit Account Deposit Account Number: 06-1510 Deposit Account Name: Ford Motor Company

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☑ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, **except for the filing fee**

☑ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☑ Credit any overpayments

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**FEE CALCULATION**

**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

| | FILING FEES | | SEARCH FEES | | EXAMINATION FEES | | |
|---|---|---|---|---|---|---|---|
| | | Small Entity | | Small Entity | | Small Entity | |
| Application Type | Fee ($) | Fee ($) | Fee ($) | Fee ($) | Fee ($) | Fee ($) | Fees Paid ($) |
| Utility | 300 | 150 | 500 | 250 | 200 | 100 | |
| Design | 200 | 100 | 100 | 50 | 130 | 65 | |
| Plant | 200 | 100 | 300 | 150 | 160 | 80 | |
| Reissue | 300 | 150 | 500 | 250 | 600 | 300 | |
| Provisional | 200 | 100 | 0 | 0 | 0 | 0 | |

**2. EXCESS CLAIM FEES**

| Fee Description | Fee ($) | Small Entity Fee ($) |
|---|---|---|
| Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent | 50 | 25 |
| Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent | 200 | 100 |
| Multiple dependent claims | 360 | 180 |

| Total Claims | Extra Claims | Fee ($) | Fee Paid ($) |
|---|---|---|---|
| _____ - 20 or HP = | _____ | x _____ | = _____ |

HP = highest number of total claims paid for, if greater than 20

| Indep. Claims | Extra Claims | Fee ($) | Fee Paid ($) |
|---|---|---|---|
| _____ - 3 or HP = | _____ | x _____ | = _____ |

HP = highest number of independent claims paid for, if greater than 3

| Multiple Dependent Claims | |
|---|---|
| Fee ($) | Fee Paid ($) |
| _____ | _____ |

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

| Total Sheets | Extra Sheets | Number of each additional 50 or fraction thereof | Fee ($) | Fee Paid ($) |
|---|---|---|---|---|
| _____ - 100 = | _____ | / 50 = _____ (round up to a whole number) | x _____ | = _____ |

**4. OTHER FEE(S)**

| | Fees Paid ($) |
|---|---|
| Non-English Specification, $130 fee (no small entity discount) | |
| Other: Appeal Brief | 500.00 |

**SUBMITTED BY**

| | | | |
|---|---|---|---|
| Signature | Jeffrey J. Chapp | Registration No. (Attorney/Agent) 50,579 | Telephone 248-223-9500 |
| Name (Print/Type) | Jeffrey J. Chapp | | Date April 8, 2005 |

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Steven Yellin Schondorf, et al.

Serial No.: 09/683,605 Group Art Unit: 3661

Filed: January 24, 2002 Examiner: Hernandez, Olga

Title: POST COLLISION RESTRAINTS CONTROL MODULE

Atty. Docket No.: 81047078 (FGT 1543 PA)

**I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Appeal Briefs – Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on:**

April 8, 2005 (Date of Deposit) Jo Anne Croskey Jo Anne Croskey (Signature)

# APPEAL BRIEF

Mail Stop Appeal Briefs - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Madam:

The following Appeal Brief is submitted pursuant to the Notice of Appeal filed February 10, 2005, in the above-identified application. The Commissioner is hereby authorized to charge the $500 filing fee to Deposit Account No. 06-1510 in the name of Ford Motor Company.

## I. Real Party in Interest

The real party in interest in this matter is The Ford Global Technologies, Inc. in Dearborn, Michigan (hereinafter "Ford"), which is the assignee of the present invention and application.

## II. Related Appeals and Interferences

There are no other known appeals or interferences, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

## III. Status of the Claims

Claims 4, 6-9, 12-15, and 22-27 are currently pending. Claims 1-3, 5, 10-11, and 16-21 have been canceled. Claims 9 and 22 are allowed. Claims 4, 6-8, 12-15, and 23-26 stand under final rejection, from which this appeal is taken. The Patent Office has not provided any correspondence with regards to claim 27. A copy of the claims on appeal is attached as an Appendix.

## IV. Status of Amendments

The claims have been amended throughout the prosecution history in response to three Non-Final Office Actions, three Final Office Actions, and four Advisory Actions. Subsequent to the cancellation of claims 1-3, 10-11, and 16-21 in Response to the Advisory Action of November 17, 2003 for case allowance and the filing of a Request for Continued Examination (RCE) on May 25, 2004, the claims have been amended in response to the Non-Final Office Action of July 30, 2004 and in response to the latest or Final Office Action of November 10, 2004. In response to the latest Final Office Action claim 4 was amended, claim 5 was canceled, and claim 6 was amended to depend from claim 4. In both of the Responses of September 14, 2004 and December 15, 2004 remarks were provided for the allowance of all currently pending claims. There have been no amendments filed subsequent to the December 15th Response.

## V. Summary of Claimed Subject Matter

By way of summary, the present invention is directed to restraint control modules (RCMs) and methods of time stamping and indicating a deployment event within an automotive vehicle having an RCM. All of the independent claims, namely claims 4, 7-8, 12, and 23-26, encompass several points of novelty, and since claims 6, 13-

15, and 27 depend from claims 4 and 12, respectively, they also contain at least the same points of novelty.

Each of claims 4, 7-8, and 24-25 recites an RCM for an automotive vehicle 12. All of the RCMs include a memory device 22 that stores a deployment time of a deployment event and a controller 14 that is electrically coupled to the memory device. See pages 3 and 4, paragraph [0016] of the specification.

Claim 4 recites an RCM for an automotive vehicle 12 that has one or more impact sensors 16. A comparator 24 compares the deployment time with a fault time and determines whether the fault time corresponds with the deployment time. The controller 14 is electrically coupled to the comparator 24. The controller 14 determines when to deploy a restraint 20, stores the deployment time, and stores in the memory device 22 a fault time corresponding to the deployment time. The fault time is indicative of the fault within a component selected from one or more of the RCM and the impact sensors 16. An indicator 18 is electrically coupled to the controller 14 and indicates when the deployment time corresponds with the fault time. See pages 3 and 4, paragraphs [0016]-[0019] and page 5, paragraph [0025]-[0027] of the specification.

The controller 14 of the RCMs of claim 7 and 8 determines when to deploy a restraint 20 and stores the deployment time. An indicator 18 is electrically coupled to the controller 14. The indicator 18 of claim 7 continuously indicates that the RCM has been on a vehicle that has been involved in a collision, until such time when the RCM is serviced or replaced. The indicator 18 of claim 8 permanently indicates that the RCM has been on a vehicle that has been involved in a collision. See pages 3 and 4, paragraphs [0016]-[0019] and page 5, paragraph [0025]-[0027] of the specification.

Claim 12 also recites an RCM for an automotive vehicle 12 that has one or more impact sensors 16. The RCM includes an indicator 18. The controller 14 is electrically coupled to the indicator 18. The controller 14 determines when to deploy a restraint 20 and stores the deployment start time and duration in the memory device 22. The controller 14 stores a fault time in the memory device 22 and signals the indicator 18 when the fault time corresponds to the deployment start time and duration. The fault time is indicative of a fault within a component selected from one or more of the RCMs

and the impact sensors 16. See pages 3 and 4, paragraphs [0016]-[0019] and page 5, paragraph [0025]-[0027] of the specification.

The controller 14 of the RCM of claim 24 stores a deployment end time of a restraint 20 in the memory device 22. See page 5, paragraph [0024] of the specification.

The controller 14 of the RCM of claim 25 determines when to deploy a restraint 20 and stores the deployment time in the memory device 22. The controller 14 stores operating time of the RCM in the memory device 22. See pages 4 and 5, paragraphs [0017], [0020], and [0027] of the specification.

Claims 23 and 26 recite methods of time stamping and indicating a deployment event within an automotive vehicle 12 having an RCM. The methods include sensing a collision, generating a collision signal in response to the collision, and deploying a restraint 20 in response to the collision signal. The method of claim 23 further includes the storage of a deployment time and the continuous indication of a fault. The indication is in response to the deployment event utilizing information from an uneraseable, unresettable, and unoverwritable memory. The method of claim 26 further includes the storage of a deployment time of the restraint 20 and the indication of whether the RCM has been on a vehicle that has been involved in a collision. The indication is uneraseable, unresettable, and unoverwritable. See pages 4 and 5, paragraphs [0017], [0019], and [0022] of the specification.

Applicants agree that the prior art within the field of automotive vehicle restraint control and collision monitoring systems has included the passive storing of data within a memory. Applicants also agree that the prior art includes the use of an erasable memory that can be erased and cleared. In addition, Applicants agree that the prior art discloses the storage of an air bag control signal transmission time, the time when an air bag is enabled, and the time when an air bag is actually expanded and deployed. Applicants further agree that the prior art discloses the continuous monitoring of a collision signal waveform up until a light collision determination has been made. What is not known or suggested are the several novel aspects of the present invention. All of the novel aspects of the present invention are not taught or suggested by the prior art separately or in combination. The novel aspects are described in detail below.

What is not known or suggested is the inclusion of an indicator 18 that is electrically coupled to a controller 14 and indicates when a deployment time corresponds with a fault time of an RCM or of an impact sensor 16. What is also not known is the inclusion of an indicator 18 that continuously indicates that an RCM has been on a vehicle that has been involved in a collision. In addition, the inclusion of an indicator 18 that continuously indicates that an RCM has been on a vehicle that has been involved in a collision, until such time when the RCM is serviced or replaced is not known. Furthermore, the inclusion of an indicator 18 that permanently indicates that an RCM has been on a vehicle that has been involved in a collision is not known. Moreover, the inclusion of an indicator 18 that is electrically coupled to a controller 14 and indicates when a fault time, of an RCM or of an impact sensor 16, corresponds with a deployment start time and duration is not known. What is more, the inclusion of an uneraseable, unresettable, and unoverwritable memory device 22 used in the storing of a deployment start time is not known. As well, a continuous indication of a fault in response to a deployment event utilizing information from an uneraseable, unresettable, and unoverwritable memory 22 is not known. On top of that, a controller 14 that stores a deployment end time of a restraint 20 is not known. Further yet, a controller 14 that stores the operating time of an RCM is not known.

Claim 6 recites a module as in claim 4 wherein the indicator 18 includes one or more of: a pulsating indicator, a light bulb, an LED, a fluorescent light, an audible signal, a visual signal, a 7-segment display, an analog gage, a digital meter, a video system, and a hazard light. See page 4, paragraph [0019], of the specification.

Claim 13 recites a module as in claim 12 wherein the indicator 18 continuously indicates that the RCM has been on a vehicle that has been involved in a collision. See page 4, paragraph [0017], of the specification.

Claim 14 recites a module as in claim 12 and further includes a comparator 24 that is electrically coupled to the controller 14, the comparator 24 compares the deployment time with a fault time and determines whether the fault time corresponds with the deployment time. See pages 3-5, paragraphs [0016], [0017], and [0026], of the specification.

Claim 15 recites a module as in claim 12 wherein information stored in the memory device 22 is uneraseable, unresettable, and unoverwritable. See page 4, paragraph [0017], of the specification.

Claim 27 recites a module as in claim 4 wherein the controller 14 stores the fault time when the fault time corresponds to the deployment time. See pages 3-5, paragraphs [0016], [0017], and [0026], of the specification.

## VI. Grounds of Rejection to be Reviewed on Appeal

The following issues are presented in this appeal, which correspond directly to the Examiner's final grounds for rejection in the Final Office Action of November 10, 2004, hereinafter referred to as the "Final Office Action", and in the Advisory Action of February 3, 2005, hereinafter referred to as the "Advisory Action":

(1) whether claims 4, 6, 12, 14-15, 23-26, and 27 are patentable under 35 U.S.C. 103(a) over Byon (U.S. Patent No. 5,847,472) in view of Okada (U.S. Pub. No. 2002/0091474), and

(2) whether claims 7-8 and 13 are patentable under 35 U.S.C. 103(a) over Byon in view of Otsu.

## VII. Argument

### A. THE REJECTION OF CLAIMS 4, 6, 12, 14-15, and 23-26 UNDER 35 U.S.C. § 103(a)

Claims 4, 6, 12, 14-15, and 23-26 stand fully rejected under 35 U.S.C. § 103(a) over Byon in view of Okada. Note that claim 27 is not rejected, objected to, or allowed in the Final Office Action or in the Advisory Action, thus Applicants are including claim 27 in this section for completeness.

Byon discloses a system for recording the operating time of an air bag 360. The system stores the transmission time of a control signal and the expansion time of the air bag 360. The control signal initiates expansion of the air bag 360. The transmission time refers to the length of time from when the control signal is generated, by a control circuit 200, to when an air bag deployment begins. Byon stores the stated times in a memory 220 that is preferably erasable and that can be reset or cleared.

The Final Office Action states, with respect to claims 24 and 25 that Byon teaches an operating time and an end time. The Office Action refers to col. 6, lines 64-67 of Byon for such teaching. In col. 6, lines 64-67 to col. 7, line 1, Byon discloses that the control circuit 200 measures the time from when the control circuit 200 judges that the expansion of the air bag 360 is necessary by reception of a first collision signal, and stores the transmission time of the control signal and the expansion time of the air bag 360. The transmission time of a control signal and the expansion time of an air bag 360 are clearly not the same as the operating time of an RCM or the end time of a restraint deployment. Also, Applicants submit that Byon discloses storing the operating time of an air bag not the operating time of an RCM. Nowhere in the stated lines or elsewhere in Byon is the storage of the operating time of an RCM taught or suggested.

Byon discloses the time to enablement, the time when an air bag is enabled, and the time when the air bag is actually expanded or deployed. The time to enablement clearly refers to a time span prior and up to deployment, as opposed to a deployment end time, which refers to when a deployment is finished. Likewise, an enablement time refers to when an air bag is deployed and an air bag deployment time refers to the duration or length of time of which during the air bag is being deployed, as opposed to when a deployment is finished. Byon also does not disclose or suggest calculating or estimating a deployment end time using the start time and duration. The storage of a deployment end time is not disclosed in the stated lines or anywhere else in Byon, and any suggestion that the references disclose or suggest such use is improper hindsight in view of the present application.

Also, although Byon discloses a clock generating device generating a clock signal, the generation of a clock signal is clearly not the same as the storage of an RCM operating time. Although a clock signal is a pulse or a timing signal from which, for example, an operating time may be determined, the simple generation of a clock signal does not teach or suggest the storage of or the determining of an RCM operating time.

The Final Office Action, with regards to claims 4, 12, and 14, admittedly states that Byon fails to teach a comparator coupled to a controller for comparing the deployment with the fault time and determining whether the fault time corresponds with the deployment time. However, the Office Action states that Okada teaches

tracking down the relationship between the operation state of an air bag and the failure of the operation control section of an air bag. Applicants submit that this is clearly different than comparing an air bag deployment time with a fault time.

The operation state of an air bag refers to the degree to which an air bag is deployed, such as whether the air bag is partially deployed or fully deployed. The failure of the operation control section of an air bag, as stated above, refers to the misoperation of an air bag igniter or air bag igniter controller. For argument sake, assuming that the failure of the operation control section of an air bag is the same as the fault time referred to in claims 4, 12, and 14, which there is no evidence thereof, an operation state of an air bag is unmistakably different than a deployment time of an air bag. The state of an air bag is not the same as the time in which an air bag is deployed. Thus, Okada fails to teach or suggest any comparison including a deployment time.

Okada determines the relationship between the state of an air bag and the failure of the operation control section of the air bag. In general, an air bag deployment system typically includes two operational sections, a first section that determines when to trigger or deploy an air bag, and a second section that controls the actual operational deployment of the air bag. The latter or second section may be referred to as the "operation control section of the air bag", as stated in Okada. Okada determines the fault time with the second section or the operation control section of an air bag deployment system, whereas the RCMs of claims 4, 12, and 14 store the fault times associated with the first section or with the trigger control section of an air bag deployment system.

There is a clear and distinct difference between the circuitry and control devices used to trigger an air bag and the devices used to control the actual deployment of and/or the manner in which an air bag is deployed. For example, the memories 22 of claims 4, 12, and 14 store fault times associated with the impact sensors 16 and the RCMs, rather than the fault times associated with an air bag igniter or air bag igniter controller. This is also inferred in the controller limitations of the RCMs, which state that the controllers determine when to deploy a restraint.

Also, an air bag igniter controller is not the same as the RCMs of claims 4, 12, and 14. An air bag igniter controller is designed for a specific operation controlling the

manner in which an air bag is deployed. An RCM, on the other hand, controls the trigger timing of an air bag. The RCM may monitor whether restraints are operating appropriately, store fault times, compare deployment times with fault times, and record time stamps; none of these functions are performed by an air bag igniter controller. In addition, there is no suggestion or teaching in Okada to the contrary.

The Final Office Action, with regards to claim 23, further states the Byon teaches continuously indicating a fault in response to the deployment event and refers to column 7 of Byon. In column 7, Byon discloses the storing of the data signal corresponding to when the air bag operating starting signal was not outputted. The storing of a data signal in a memory is not the same as the indicating of a fault using information from a memory. In the first instance one is passively storing data. In the second instance one is actively indicating a fault using information from a memory, as opposed to putting information into a memory. Again, nowhere in Byon is such indication taught or suggested.

The Final Office Action, with regards to claims 15, 23, and 26 also admittedly states that neither Byon nor Okada teach the use of a memory that is uneraseable, unresettable, and unoverwritable, such as the memory 22 of the present application. However, the Office Action states that it would have been obvious to one skilled in the art to substitute a storage device for another storage device. Applicants submit that it would not have been obvious to substitute the claimed memory device for that used in Byon and Okada, especially since Byon and Okada both utilize an erasable memory and Byon teaches away from using memory other than an erasable memory.

Referring to MPEP 2141.02, the prior art must be considered in its entirety, including disclosures that teach away from the claims. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). Byon discloses a memory that is preferably erasable and that can be reset or cleared. Okada discloses in paragraph [0038] the use of a memory, such as EEPROM. EEPROM stands for Electrically Erasable Programmable Read Only Memory. Nowhere in Byon or Okada is there any suggestion to a memory that is uneraseable, unresettable, and unoverwritable or any single component thereof. Also, throughout both Byon and

Okada the ability to erase or reset memory and/or parameters is discussed and preferred.

Also, referring to MPEP 2143.01, although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." See In re Fritch, 972 F. 2d at 1260 (Fed. Cir. 1992). Applicants submit that no suggestion or motivation exists within Byon or Okada to use a memory that is uneraseable, unresettable, and unoverwritable. Thus, it is not inherent or obvious in view of Byon and Okada to use a memory that prevents the data from being reset, erased, and overwritten.

The Final Office Action, with regards to claims 4, 6, 12, 23, and 26, further states that neither Byon nor Okada teach the claimed indicator. However, the Office Action states that Okada teaches data indication no matter the situation and refers to paragraph [0007] of Okada. Applicants submit that in paragraph [0007] Okada states that maximum acceleration and elapsed time are stored into a nonvolatile memory. Okada also states in the same paragraph that in the event of a collision that the memory is broken and it is not easy to track down the cause of the accident. Okada does not state data indication no matter the situation, on the contrary, it provides a situation in which data is lost or cannot be indicated. Also, Okada simply states that data is stored. Okada does not state that data is indicated, as claimed.

The systems of Byon and Okada are passive in that they store data in a memory, but do not provide any indication of that data. On the other hand, the claimed invention is active in that it specifically indicates the information stored, such that a vehicle occupant or service attendant can readily and visually detect such indication and perform appropriate tasks in response thereto. This promotes the timely servicing and replacing of safety system components when appropriate. In addition, this also provides current status information of safety system components, which may be readily observed by a vehicle occupant and/or provide notice to a purchaser of a vehicle. Thus, Applicants submit that the claimed indicator is not taught or suggested by Okada or Byon.

The Office Actions have also stated that it would have been obvious to combine Byon and Okada in order to track down the cause of a collision with a small memory

capacity. The RCMs claimed allow one to determine whether an impact sensor, a restraint, or an RCM needs to be serviced or replaced this is clearly different than the tracking down the cause of a collision with small memory capacity, besides the limitations of "tracking down the cause of a collision with small memory capacity" are not recited in any of the claims.

Also, there is no motivation or suggestion in either Byon or Okada to combine and modify the stated references to arrive at the claimed invention. Referring to MPEP 2143.01, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Neither Byon nor Okada teach or suggest storing of an operating time of an RCM, storing of an end time of a restraint deployment, comparing the deployment with the fault time and determining whether the fault time corresponds with the deployment time, continuously indicating a fault in response to the deployment event, use of a memory that is uneraseable, unresettable, and unoverwritable, and an indicator or an indication as claimed. There is no suggestion in either Byon or Okada for any combination and modification thereof or does the combination of each reference allow one to arrive at the present invention as is claimed.

Referring to MPEP 706.02(j) and 2143, to establish a *prima facie* case of obviousness the prior art reference(s) must teach or suggest all the claim limitations, see *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Thus, Applicants submit that Byon and Okada fail to teach or suggest each and every limitation of claim 4, 6, 12, 14-15, and 23-26, therefore the combinations in claims 4, 6, 12, 14-15, and 23-26 are not found in the prior art and each of the stated claims are believed to be independently patentable and allowable.

Claim 27 is believed to be independently patentable and allowable for the reasons set forth above since it depends from claim 4 and further recites the controller 14 storing the fault time when the fault time corresponds to the deployment time. Neither of the references teaches nor suggests this combination.

**B. THE REJECTION OF CLAIMS 7-8 AND 13 UNDER 35 U.S.C. § 103(a)**

Claims 7-8 and 13 stand fully rejected under 35 U.S.C. § 103(a) over Byon in view of Otsu.

With respect to claims 7-8 and 13, the Final Office Action states that Byon does not teach an indicator that is electrically coupled to the controller, the indicator continuously indicating that the RCM has been on a vehicle that has been involved in a collision, until such time when the RCM is serviced or replaced. However, the Office Action states that Otsu teaches a controller continuously monitoring the waveform of a collision signal and refers to col. 5, lines 17-31 for such reliance. Note that this argument recites limitations within claim 7 and does not refer to the limitations recited in claim 8, such as the permanent indication that the RCM has been on a vehicle that has been involved in a collision. Claim 13 also recites an RCM such as that recited in claim 8, but further includes the indication of when a fault time corresponds with a deployment start time.

Applicants submit that continuously monitoring a waveform of a collision signal is not the same as continuously indicating that an RCM has been on a vehicle that has been involved in a collision and is also not the same as permanently indicating the same. Monitoring a signal waveform is unrelated to indicating the status of an RCM. Otsu monitors the collision sensor waveform to determine whether a collision has occurred and whether it is appropriate to fire a second squib, whereas the RCM of claims 7-8 and 13 indicates that an RCM has been on a vehicle that has been involved in a collision such that the RCM or some other safety related device may be serviced or replaced. In col. 5, lines 17-31, the system of Otsu monitors the signal waveform to determine whether a light collision has occurred. When a light collision has occurred the system of Otsu fires a second squib. Note that the task of monitoring a signal waveform as performed by Otsu occurs prior and during the beginning portion of a collision event, whereas, the task of indicating the status of a RCM occurs after a collision event. Otsu does not teach or suggest that the signal waveform is monitored after the determination of whether a light collision has occurred.

Also, the monitoring of a collision signal is clearly and substantially different than the indicating of the status of an RCM. Not only does Otsu not provide the claimed indication, Otsu does not teach or suggest an indicator. As with Byon and Okada, Otsu is also passive in that it only stores information, but does not provide any indication thereof. Thus, neither Byon nor Otsu alone or in combination teach or suggest each and every element of claims 7-8 and 13 and the *prima facie* case of obviousness has not been met.

Also, there is no motivation or suggestion in either Byon or Otsu to combine and modify the stated references to arrive at the claimed invention. Referring to MPEP 2143.01, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Neither Byon nor Otsu teach or suggest continuously indicating that an RCM has been on a vehicle that has been involved in a collision, until such time when the RCM is serviced or replaced or the permanent indication of the same. There is no suggestion in either Byon or Okada for any combination and modification thereof or does the combination of each reference allow one to arrive at the present invention as is claimed.

Thus, Applicants submit that Byon and Otsu fail to teach or suggest each and every limitation of claim 7-8 and 13, therefore the combinations in claims 7-8 and 13 are not found in the prior art and each of the stated claims are believed to be independently patentable and allowable.

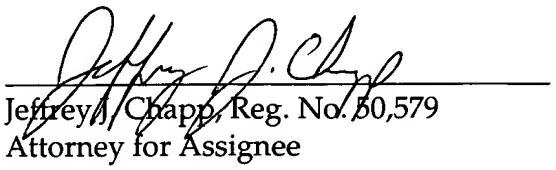
## VIII. Appendix

A copy of the claims involved in this appeal, namely claims 4, 6-8, 12-15, 23-26, and 27 is attached hereto as Appendix A.

## IX. Conclusion

For the reasons advanced above, Appellants respectfully contend that each claim is patentable. Therefore reversal of the rejection is requested.

Respectfully submitted,



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# APPENDIX A

What is claimed is:

4. A restraints control module (RCM) for a vehicle that has at least one impact sensor comprising:

a memory device for storing a deployment time of a deployment event;

a comparator comparing said deployment time with a fault time and determining whether said fault time corresponds with said deployment time; and

a controller electrically coupled to said memory device and said comparator, said controller determining when to deploy a restraint, storing said deployment time, and storing in said memory device a fault time corresponding to said deployment time, said fault time indicative of said fault within a component selected from at least one of the RCM and the at least one impact sensor; and

an indicator electrically coupled to said controller and indicating when said deployment time corresponds with said fault time.

6. A module as in claim 4 wherein said indicator comprises at least one of: a pulsating indicator, a light bulb, an LED, a fluorescent light, an audible signal, a visual signal, a 7-segment display, an analog gage, a digital meter, a video system, and a hazard light.

7. A restraints control module (RCM) for a vehicle comprising:

a memory device for storing a deployment time of a deployment event;

a controller electrically coupled to said memory device, said controller determining when to deploy a restraint and storing said deployment time; and

an indicator electrically coupled to said controller, said indicator continuously indicating that the RCM has been on a vehicle that has been involved in a collision, until such time when the RCM is serviced or replaced.

8. A restraints control module (RCM) for a vehicle comprising:

a memory device for storing a deployment time of a deployment event;

a controller electrically coupled to said memory device, said controller determining when to deploy a restraint and storing said deployment time; and

an indicator electrically coupled to said controller, said indicator permanently

indicating that the RCM has been on a vehicle that has been involved in a collision.

12. A restraints control module (RCM) for a vehicle that has at least one impact sensor comprising:

an indicator;

a memory device for storing a deployment start time of a deployment event; and

a controller electrically coupled to said indicator and said memory device, said controller determining when to deploy a restraint and storing said deployment start time and duration in said memory device;

said controller storing a fault time in said memory device and signaling said indicator when said fault time corresponds to said deployment start time and duration, said fault time indicative of a fault within a component selected from at least one of the RCM and the at least one impact sensor.

13. A module as in claim 12 wherein said indicator continuously indicating that the RCM has been on a vehicle that has been involved in a collision.

14. A module as in claim 12 further comprising a comparator electrically coupled to said controller, said comparator comparing said deployment time with a fault time and determining whether said fault time corresponds with said deployment time.

15. A module as in claim 12 wherein information stored in said memory device is uneraseable, unresettable, and unoverwritable.

23. A method of time stamping and indicating a deployment event within an automotive vehicle having a RCM, said method comprising:

sensing a collision;

generating a collision signal in response to said collision;

deploying a restraint in response to said collision signal;

storing a deployment time; and

continuously indicating a fault in response to the deployment event utilizing information from an uneraseable, unresettable, and unoverwritable memory.

24. A restraints control module for a vehicle comprising:

a memory device for storing a deployment time of a deployment event; and

a controller electrically coupled to said memory device, said controller storing a deployment end time of a restraint in said memory device.

25. A restraints control module for a vehicle comprising:

a memory device for storing a deployment time of a deployment event; and

a controller electrically coupled to said memory device and determining when to deploy a restraint and storing said deployment time in said memory device, said controller storing operating time of the restraints control module in said memory device.

26. A method of time stamping and indicating a deployment event within an automotive vehicle having a RCM, said method comprising:

sensing a collision;

generating a collision signal in response to said collision;

deploying a restraint in response to said collision signal;

storing a deployment time of said restraint; and

indicating whether the RCM has been on a vehicle that has been involved in a collision, wherein said indication is uneraseable, unresettable, and unoverwritable.

27. A module as in claim 4 wherein said controller stores said fault time when said fault time corresponds to said deployment time.